

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/33173

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B65D 55/02

US CL : 215/219

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 215/219, 213, 214, 216, 217, 221, 43, 44, 305, 321, 330, 334, 336, 337

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,988,412 A (MINNETTE et al) 23 November 1999 (23.11.1999), see entire document.	1-5, 10-29, 32-46
X	US 4,116,351 A (UHLIG) 26 September 1978 (26.09.1978), see entire document.	1-11, 14-40, 43-46
Y	US 3,949,893 A (UHLIG) 13 April 1976 (13.04.1976), see entire document.	5 and 26
Y	US 5,687,863 A (KUSZ) 18 November 1997 (18.11.1997), see entire document.	7 and 28
Y	US 3,854,622 A (McKIRNAN) 17 December 1974 (17.12.1974), see entire document.	11 and 40
Y	US 6,357,615 B1 (HERR) 19 March 2002 (19.03.2002), see entire document.	11 and 40
Y	US 4,273,247 A (BARLS) 16 June 1981 (16.06.1981), see entire document.	12-13 and 41-42
Y	US 4,134,513 A (MUMFORD) 16 January 1979 (16.01.1979), see entire document.	17 and 44
Y	US 6,319,453 B1 (KLIMA, JR. et al) 20 November 2001 (20.11.2001), see column 10, line 54.	18 and 45

Further documents are listed in the continuation of Box C.

See patent family annex.

Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

17 February 2005 (17.02.2005)

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Faxsimile No. (703) 305-3230

Authorized officer

Lee Young *Sharon J. Greene Jr.*

Telephone No. (571) 272-4050

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,698,605 B2 (CLODFELTER et al.) 02 March 2004 (02.03.2004), see entire document.	1-46
A	US 6,561,369 B1 (CLODFELTER et al.) 13 May 2003 (13.05.2003), see entire document.	1-46
A	US 6,386,380 B1 (CLODFELTER et al.) 14 May 2002 (14.05.2002), see entire document.	1-46
A	US 6,112,921 A (ROBINSON) 05 September 2000 (05.09.2005), see entire document.	1-46
A	US 6,036,036 A (BILANI et al.) 14 March 2000 (14.03.2000), see entire document.	1-46
A	US 6,003,700 A (JULIAN et al.) 21 December 1999 (21.12.1999), see entire document.	1-46
A	US 5,865,330 A (BUONO) 02 February 1999 (02.02.1999), see entire document.	1-46
A	US 5,413,233 A (HALL) 09 May 1995 (09.05.1995), see entire document.	1-46
A	US 5,394,999 A (KRALL) 07 March 1995 (07.03.1995), see entire document.	1-46
A	US 4,826,026 A (GACH et al.) 02 May 1989 (02.05.1989), see entire document.	1-46
A	US 4,667,836 A (McLAREN) 26 May 1987 (26.05.1987), see entire document.	1-46
A	US 4,540,098 A (LUKER) 10 September 1985 (10.09.1985), see entire document.	1-46
A	US 4,117,945 A (MUMFORD) 03 October 1978 (03.10.1978), see entire document.	1-46
A	US 3,984,021 A (UHLIG) 05 October 1976 (05.10.1976), see entire document.	1-46
A	US 3,826,395 A (MONTGOMERY) 30 July 1974 (30.07.1974), see entire document.	1-46
A	US 2002/0166834 A1 (BRANSON et al.) 14 November 2002 (14.11.2002), see entire document.	1-46